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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,150	06/20/2003	Thomas H. Ottenheimer	10019119-4	7128

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EXAMINER

DO, AN H

ART UNIT PAPER NUMBER

2853

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/601,150

Applicant(s)

. OTTENHEIMER ET AL.

Examiner

An H. Do

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23 and 28-32 is/are allowed.
- 6) ☒ Claim(s) 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The Amendment filed on 05 November 2004 has been acknowledged.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Baughman et al (US 5,441,593).

Baughman et al disclose in Figure 3 and 4A-4D the following claimed features:

Regarding claim 24, a substrate (12, column 5, lines 51-55) having fluid handling slots (18) comprising: a substrate (12); and, a slot portion (18) received in the substrate (12) and having a central region (18') and a pair of terminal regions (Figure 3, formed by 18a on both sides of the slot), wherein the central region (18') extending along a pair of sidewalls (walls of 18a) that lie along individual planes that are generally parallel (Figure 3), the planes defining a space therebetween, and, and at least one terminal region (18a) of the slot portion (18) being defined, at least in part, by one or more sub-regions (portions formed of 18a) that lie outside of the space between the planes (Figures 3 and 4), and the terminal regions (18a) are generally sickle-shaped (Figure 4C, where portion of 18a is rounded).

Regarding claim 25, a fluid ejecting device (Figures 3 and 4A-4D) comprising: a substrate (12) having a thickness defined by generally opposing first (top surface of 12)

and second surfaces (bottom surface of 12); and, one or more fluid slots (18) received in the substrate (12), wherein individual fluid feed slots (18) include a central region (Figure 3, element 18') that is defined in at least the first surface (top surface of 12) by generally opposing side walls (walls of 18a), and wherein individual fluid feed slots (18) are further defined by two generally opposing terminal regions (Figure 3, two rows of portions 18a) extending along the first surface (top surface of 12) from two ends of the central region (Figure 3, element 18').

### ***Response to Arguments***

3. Applicant's arguments filed 05 November 2004 have been fully considered but they are not persuasive. Applicant presented new claims 24 and 25 and concluded that those claims are allowed. However, this argument is not persuasive since claims 24 and 25 contain all limitations which have been rejected in the previous Office Action and are still remained rejected.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Allowable Subject Matter***

5. Claims 1-23 and 28-32 are allowed.

The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 1-9, 17, 18 and 32 is the inclusion of the limitation of a print head that includes a slot having a central region and one or more terminal regions, the slot extending along a long axis that does not intersect the first surface or the second surface and that extends through at least a portion of the central region and the one or more terminal regions. It is this limitation found in the claims, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 10, 11 and 19-23 is the inclusion of the limitation of a slotted substrate for use in a fluid ejecting device that includes a slot received in the substrate and extending between a first substrate surface and a second substrate surface, the slot having a central region and two or more terminal regions, wherein the central region and the at least two terminal regions are oriented such that the an axis can pass through the central region and at least two of the terminal regions without intersecting either of the first substrate surface or the second substrate surface. It is this limitation found in the claims, as it is claimed in the

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combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 12-16 is the inclusion of the limitation of a structure that includes a slot portion having a central region and a pair of terminal regions through which the long axis passes without intersecting either of the first and second surfaces. It is this limitation found in the claims, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 28-31 is the inclusion of the limitation of a slotted substrate for use in a fluid ejecting device that includes individual terminal regions being defined by a radius of curvature that is greater than one half of the width of the terminal region. It is this limitation found in the claims, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Claims 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 26 and 27 is the inclusion of the limitation of wherein each of the terminal regions is generally circular in shape and each has a diameter greater than a width between the generally opposing side walls. It is this limitation found in the claims, as it is claimed in the combination of, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

#### ***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AD  
March 7, 2005



**Stephen D. Meier**  
Primary Examiner